

a high temperature.

Although specific embodiments of the invention have been described and illustrated, one skilled in the art will recognize other embodiments, not expressly described, but which fall within the scope of the invention.

#### **CLAIMS**

I claim:

1. A magnetic disk drive comprising:

a magnetic disk having first storage area and second storage area;

a spindle motor that rotates said magnetic disk;

a magnetic head capable of recording or retrieving data to or from said magnetic disk;

an actuator that locates said magnetic head relative to said magnetic disk;

a base fixedly holding said spindle motor and said actuator;

a temperature sensor for measuring surrounding temperature;

an interface that enables said magnetic head to transfer signals to and from an external device, a CPU that controls said actuator and said spindle motor; and

a cover;

wherein one of said first and second storage areas

are selected based on surrounding temperature in recording data.

2. A magnetic disk drive as in claim 1 wherein said first and second storage areas differs in its data storage characteristic or in its data storage function.

3. A magnetic disk drive as in claim 1 wherein said interface comprises;

a control circuit, and  
a read/write channel.

4. A magnetic disk drive as in claim 1, wherein said storage areas include

a first storage area capable of writing information at low temperatures, and

a second storage area capable of holding information at high temperatures.

5. A magnetic disk drive as in claim 1, wherein said storage areas include

a first storage area, which data is recorded at low temperatures, and

a second storage area, which assures data retention at high temperatures.

6. A magnetic disk drive as in claim 4, wherein said second storage area is used for an ordinary recording operation.

7. The magnetic disk drive as in claim 4, wherein first coercive force of said first storage area is smaller than second coercive force of said second storage area.

8. A magnetic disk drive as in claim 5, wherein said second storage area is used for an ordinary recording operation.

9. The magnetic disk drive as in claim 5, wherein first density of recording bits in a track of said first storage area is smaller than second density of recording bits in a track of said second storage area.

10. A method of controlling a magnetic disk drive comprising:

recording data in first storage area of a magnetic disk at low temperature; and

recording data in second storage area of the magnetic disk at high temperature.

11. A method as in claim 10 wherein said magnetic disk drive includes

a magnetic disk having first and second storage areas, and  
a temperature sensor for measuring surrounding temperature.

12. A method as in claim 10 wherein said first and second storage areas differs in its data storage characteristic or in its data storage function.

13. A method of controlling a magnetic disk drive comprising:

recording data in first storage area of a magnetic disk at low temperature; and

recording said data stored in said first storage area in second storage area of the magnetic disk if surrounding temperature is high.

14. A method as in claim 13 wherein said magnetic disk drive includes

a magnetic disk having first and second storage areas, and  
a temperature sensor for measuring surrounding temperature.

15. A method as in claim 13 wherein said first and second storage areas differs in its data storage characteristic or in its data storage function.